



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Docket

January 3, 1989

Docket No. 50-260

Mr. Oliver D. Kingsley, Jr.
Senior Vice President, Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Mr. Kingsley:

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNIT 2 - RESPONSE TO PLANT SURVEILLANCE PROGRAM SAFETY EVALUATION OPEN ITEMS (TAC NO. 62252)

We have evaluated the subject response, provided in an October 31, 1988 letter from S. A. White to the NRC. The Tennessee Valley Authority's (TVA) response to the issues raised in our Safety Evaluation (SE) of the improvements to the Browns Ferry Nuclear (BFN) plant surveillance program is in accordance with their management prerogatives, and it is the staff's conclusion that TVA has satisfactorily addressed the programmatic issues raised in our SE. Furthermore, we find that TVA's justification on the acceptability of surveillance instructions already developed is acceptable.

However, we have identified certain issues related to the implementation of the surveillance program at BFN which require your attention prior to restart. These issues are discussed in the following paragraphs:

A. SYSTEMS ENGINEER CONCEPT IN RELATION TO THE PLANT SURVEILLANCE PROGRAM

We have reviewed TVA's clarification of the Browns Ferry Nuclear Performance Plan (BFNPP) passages regarding the role of the Systems Engineers in the review and trending of Surveillance Instruction (SI) data. We note that the revised division of responsibilities for SI data review and trending, if properly implemented, will effectively correct the root cause of inadequate SI reviews in the past, as identified in the BFNPP (Volume 3, Revision 2, October 24, 1988):

"In the past, SI reviews were done by engineers who had day-to-day responsibilities other than their assigned system cognizance. This effectively diluted the amount of time which could be spent on system performance evaluations such as SI review."

B. SI VALIDATIONS

Although TVA has increased the scope of third party observations of SI validations, the issue of proper validation of SIs, as reflected in recent observations of implementation, remains. Validation is the final review step

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in the development of each SI, and its most important function is to verify that the SIs can be performed as written. If an SI is improperly validated, then it may not be workable. One factor which contributed to personnel error associated with the conduct of SIs at BFN in the past was unworkability of procedures. Recently, instances of personnel error in the conduct of surveillance testing have been cited in LERs from BFN. While the specific events in question are closely intertwined with our concerns about the success of improved management practices in reducing personnel error, as discussed below in greater detail, the link between personnel error, SI workability, and SI validation indicates that these events may have been partially caused by inadequate SI validation.

C. SI VERIFICATION

As discussed in the introductory paragraph of this letter, we agree that TVA's SI development process is programmatically constructed to allow the development of technically correct SIs. However, there appear to be problems with the ability of this process to produce SIs which are capable of accurately testing those items which they are intended to test. Because BFN's SI development process is programmatically sound, our concerns in this regard rest with the implementation of the program. We note from our review of the BFN SSFI report submitted to NRC on September 23, 1988, that there exist several cases of items requiring surveillance testing for which SIs either do not exist or do not adequately test all the the flow paths, system line-ups, or devices requiring testing per the Technical Specifications. These concerns are detailed in BFN SSFI Report No. BFA 88811, observations BF-SMK-4, BF-SFK-4, BF-RB-1, and BF-RB-2. As well, LER 50-259-88-035 identified procedural inadequacy as the root cause of an unplanned initiation of control room emergency ventilation. The inadequacies discussed in these SSFI and LER findings are significant in themselves, but they also indicate potential generic problems with the implementation of the SI development and review process.

D. IMPROVED MANAGEMENT PRACTICES TO FOSTER PROCEDURAL COMPLIANCE AMONG PERSONNEL

As noted in both the NRC Safety Evaluation and in TVA's response to the Safety Evaluation, BFN management has reemphasized the importance of demanding that instructions be performed as written. These improved management practices should effectively reduce personnel error associated with surveillance testing, yet several recent instances of personnel error cast doubt on the effectiveness of these practices. Specifically, LERs 50-259-88-041, 50-260-88-007, and 50-260-88-011 cite personnel error as the root causes of events related to testing.

E. COMMITMENT TRACKING

It is incumbent on TVA to ensure that all commitments contained in the BFNPP, which is TVA's response to our September 17, 1985 information request pursuant to 10 CFR 50.54(f), are adequately tracked and satisfied in order to prevent unnecessary delays in the resolution of outstanding licensing issues. The staff will review this commitment tracking capability as part of its Corporate Commitment Tracking System audit planned for the month of January 1989.



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We would like to reiterate that the proper implementation of the corrective actions to the surveillance program will determine the effectiveness of BFN's surveillance testing. Based in part on the above discussion, we are also planning to perform a final team inspection of the Browns Ferry surveillance program prior to Unit 2 restart. While this inspection will be oriented toward assessing the readiness of the BFN surveillance program to support an operating nuclear power plant, each of the issues described in the preceding paragraphs will receive particular attention. Any safety significant issues discovered during this inspection will require resolution prior to the restart of BFN Unit 2.

Sincerely,
Gerald E. Gears for

Suzanne Black, Assistant Director
for Projects
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cc: See next page

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Browns Ferry Nuclear Plant

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